

REMARKS

Claims 1-5 and 11 are now pending in the application. Claims 6-10 have been canceled without prejudice or disclaimer. Claim 1 has been amended to recite “rubber molecule, wherein said maleimide terminated rubber is the reaction product of a rubber having imino group on both ends of the rubber molecule” in place of “ molecule a rubber having amino group and/or imino group on both ends of the molecule”. Claim 11 has been amended to recite “comprising the curable composition of claim 5 and a reinforcement fiber, wherein said prepreg is obtained by impregnating the curable composition to the reinforcement fiber” in place “wherein the curable composition of claim 5 is used”. The amendments to the claims do not introduce any new matter.

The rejection of Claims 1-11 under 35 USC 112, second paragraph in the use of the term “obtainable” Claim 1 has been obviated by the cancellation of this term from the claims and the addition of the recitation “is the reaction product of”

The rejection of Claims 6-11 under 35 U.S.C. § 101 has been overcome by the cancellation of claims 6-10 and the amendment of claim 11 reciting “wherein said prepreg is obtained by impregnating the curable composition to the reinforcement fiber”.

Claim 1 was rejected under 35 USC 102(b) as being anticipated by US Patent 2,818,405 to Kovacic. Kovacic fails to anticipate claim 1. In particular, Kovacic does not describe a rubber having maleimide structure on both ends of the rubber molecule.

For instance, the scheme shown in col. 2 in Kovacic does not explicitly show the terminal end structure. Specifically, Kovacic describes in col. 6, lines 20 to 28 that a linear product obtained by heating a liquid compositions containing only the bismaleimide and organic diamine may be cured with an organic diisocyanate, suggesting that such the product would have remains of active hydrogen on some positions including ends of the product.

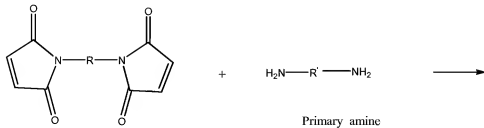
Moreover, claim 1 of Kovacic merely suggests a mixture of a bismaleimide in which R is a bivalent hydrocarbon and a diamine having a molecular weight between 750 and 12,000 in which R' is a bivalent polymeric hydrocarbon.

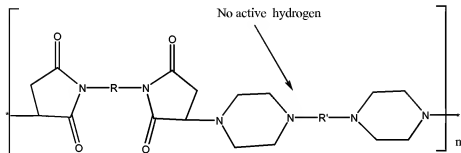
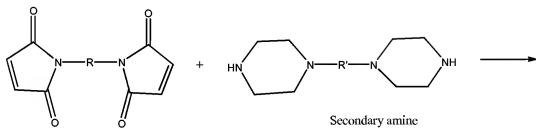
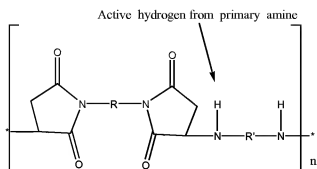
In addition, the “maleimide terminated rubber” recited in the claim 1 of the present application is obtained by converting imino terminated structure that is highly reactive with epoxy group or the like in an imino terminated rubber to a bismaleimide terminated structure that is non-reactive with epoxy group or the like, taking into consideration long term stability even if combined with another resin such as epoxy resin.

Kovacic, on the other hand, does not take into consideration long term stability and therefore, Kovacic no where addresses the design of a rubber to have a maleimide terminated structure.

Furthermore, as Kovacic shows in the scheme in col. 2 (shown in (1) below), the product has an active hydrogen not only on ends of the molecule but on other positions. When the product is used together with an epoxy resin or the like, the active hydrogen would react with the epoxy group or the like, resulting in an inferior long term stability.

In this regard, amended claim 1 recites the embodiment of reacting with “a rubber having imino group on both ends of the rubber molecule” so, as the below scheme (2) shows, the maleimide terminated rubber of the amended claim 1 as a reaction product does not include any active hydrogen at all on any positions including both ends. With this structure, the reaction product of the amended claim 1 further improves the long term stability.





Kovacic fails to anticipate the present invention since anticipation requires the disclosure, in a prior art reference, of each and every recitation as set forth in the claims. *See Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986), and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir. 1986).

There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. 102. *See Scripps Clinic and Research Foundation v. Genetech, Inc.*, 18 USPQ2d 1001 (CAFC 1991) and *Studiengesellschaft Kohle GmbH v. Dart Industries*, 220 USPQ 841 (CAFC 1984).

Claims 2-11 were rejected under 35 USC 103(a) as being unpatentable over US Patent 5,364,700 to Domeier in view of US Patent 2,818,405 to Kovacic. The cited references do not render obvious claims 2-11. Domeier fails to overcome the above discussed deficiencies of Kovacic with respect to rendering unpatentable the present invention. As discussed above, Kovacic does not disclose a rubber having maleimide structure on both ends of the molecule. Accordingly, claims 2-5 and 11 are patentable for at least those reasons as to why claim 1 is patentable.

In view of the above, consideration and allowance are respectfully solicited.

In the event the Examiner believes an interview might serve in any way to advance the prosecution of this application, the undersigned is available at the telephone number noted below.

The Office is authorized to charge any necessary fees to Deposit Account No. 22-0185, under Order No. 22365-00005-US1 from which the undersigned is authorized to draw.

Dated: December 14, 2007

Respectfully submitted,

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